1. Task Name: Conduct Functional Requirements Review

2. Purpose:

To review the functional requirements as documented, to assess their completeness and correctness, to determine if these requirements are sufficiently documented to proceed to design, and to determine if they are testable.

3. Roles:

Functional Analysts present the functional requirements for completeness and accuracy. Technical Analysts review the functional requirements for completeness to move to design. Test team reviews the functional requirements for testability.

4. Entrance Criteria:

a. Documented Risks (S-PM-013)
b. Review Report Standard (S-SE-001)
c. Review Defect Report Standard (S-SE-002)
d. Functional Analysis Standard (S-SE-004)
e. Completed Functional Analysis Section of the SCR (S-CM-002)
f. Review Checklist Standard (S-PM-018)
g. Completed Functional Hierarchy Diagram
h. Completed Process Model
i. Completed Entity Relationship Diagram

5. FRR Procedures

Conduct Functional Requirements Review

Purpose

The Functional Requirements Review (FRR) is conducted to verify that the business level analysis is complete, correct, satisfies the functional requirements, and adheres to the standards identified in the SQA Plan. During the FRR, the functional analysts evaluate the analysis models (i.e., entity relationship diagram, functional hierarchy model, process model, and the Create, Retrieve, Update, and Delete matrix (CRUD)) to ensure that all functional requirements are fully defined and documented. The technical analysts participate in the FRR by reviewing the products developed by the functional analysts to verify that there is enough information available to move into design. The FRR may be held in increments to discuss one or more SCRs. Informal reviews may or may not include a formal meeting, but are subject to the same reporting requirements as described below for formal reviews. Analysis documents are also reviewed for analysis standards. An SQA process review of the FRR is recommended.

Process

5.1. Plan Reviews (SQA and FRR)

The individual project teams will schedule an SQA review and FRR when the teams feel that they have performed the analysis to a point where they are ready to begin the design process. By this point, the project team should have produced a fully documented Entity Relation Diagram (ERD), detailed Functional Hierarchy Diagram (FHD) which includes a full CRUD definition, and complete process model. The CRUD definition means that every low level function has identified with it the entities and associated attributes which will Create, Replace, Update, and/or Delete instances of that Entity.

5.2 Conduct the SQA Review

The project SQA should review the products prepared for the FRR prior to actually conducting the FRR. Use of the attached review forms is required to be sure that all analysis objects are thoroughly reviewed. The results of the SQA team's review should be presented to the project team prior to the FRR. Changes to the ERD, FHD, CRUD, or process model, due to the SQA review, should then be completed, again, prior to conducting the FRR. There are two types of reports that should be reviewed. In step 5.2.1 reports that identify completeness in documenting the requirements are reviewed. In step 5.2.2 reports that identify correctness in documenting the requirements are reviewed.

5.2.1. Generate the appropriate quality assurance reports for the integrated requirements from Oracle Designer for each application.

These reports show information that will cause errors in the transformation process because of improper modeling or insufficient information. These problems should be documented in the review checklists in Appendix A

Report	Report Purpose	Report Shows
Entity Completeness Check	Various quality checks for the Entity Relationship Model	8. Entities with no attributes 2. Entities with no description 3. Entities with no relationships 4. Entities with no unique identifiers 5. Entities that are not used by any functions
Quality Checking of Relationships	Relationships in the Entity Relationship Model which are non-standard	8. Many to many relationships 2. One to one relationships 3. Recursive relationships that are not optional on both sides

5.2.2. Review deliverables by application, for completeness, accuracy, maintainability, and reliability. In accordance with established DFAS guidelines.

These reports show details of the analysis. The project team should use these reports to fill out the review checklists found in Appendix A.

Report	Report Purpose	Report Shows
Entity definition	Details include the synonyms, description,	Names, descriptions, and notes of

	attributes, relationships and unique identifiers for each entity.	entities and attributes, initial and growth information, and formats of attributes and domains if have been identified for the attribute. Report also describes any relationships between entities.
Entities and their Attributes	Lists all the entities with details of the attributes describing each entity.	Entity names, attributes and their format, descriptions and notes
Attribute Definition	Comprehensive details of all the attributes describing entities in the specified application system.	Attribute details including format, domains if the attribute is associated with a domain, and any check and value lists associated with the attribute. Listing is ordered by Attribute.
Domain Definition	Shows all the details for a domain and any sub-domains.	Domain details including, description and comments, format, and acceptable values, default, and definition of the meaning of null value.
Attributes in a Domain	Lists all attributes within domains	Listing of the attributes that have been assigned to each domain.
Function Hierarchy	Shows the hierarchy of the functions	Depicts for each function the level of the function and shows the parent and children of each function.

5.3 Conduct the FRR

5.3.1 Prepare for FRR

The functional community provides the requirements to be reviewed to other functional communities, the technical community, and the test community. Not only should the D2K application names be provided but also any other documentation.

5.3.2 Conduct the FRR

The functional and technical analysis teams will together conduct the review. The project team will be responsible for providing all information to management, SQA team, test team, etc. during the review session. During the FRR, the Functional Hierarchy Diagram (FHD), Entity Relationship Diagram (ERD), and process models for each component of the release are reviewed for completeness and correctness. The functional community reviews these products to determine if all the functional requirements have been fully defined and documented. The technical community reviews these products to verify that there is enough information to move into the design phase. The testing community reviews these products to verify that the requirements are testable.

5.3.3 Document the results of the FRR

The results of the FRR are documented via the Review Defect Report and Review Checklist. These forms are filled out with action items and responsible parties identified.

5.4 Approve/Disapprove Requirements

5.4.1 Sign Approval/Disapproval Form

Both the DCD Program Manager and DCII Technical Architect sign the form approving/disapproving the functional requirements as presented. This document becomes a form output product from this review.

5.5 Track Action Items

All action items identified during the FRR are to be tracked to closure. Bi-weekly reports should be sent to the DCD Program Manager and DCII Technical Architect which identify the status of the action items.

6. Exit Criteria:

a) Updated Functional Analysis Schedule (Update Analysis Work) (S-PM-011)
b) Documented Risks (S-PM-013)
c) Completed Functional Turnover Review Report (S-SE-001)
d) Completed Functional Turnover Review Defect Report (S-SE-002)
e) Completed Functional Analysis Section of SCR (Turnover Date) (S-CM-002)
f) Completed Functional Turnover Review Checklist (S-PM-018)

7. Measures:

Data Collected for each Review
- Type of Review
- Date of Review
- Number of SCRs Reviewed
- Duration of Review (In Hours)
- Number of Participants
- Number of Saves by Origin
- Number of Saves by Cause
- Number of Saves by Priority
- Numerical Value of Checklist

Data Collected for each Defect
- Effort Required to Resolve Defect

Data Collected for each SCR
- Revised Stop Date
- Revised Size of Change
- Revised Effort
- Accepted Date (FTR)

Data Collected for each Risk
- Priority
- Date Identified
- Status
- Date Closed

Data Collected for each Action Item Generated
- Resolved By
- Resolution Date

REVIEW FORM

Business Unit & Project **Version: 1**	**Review Date:**	**Autho**
Reviewers Names OR Associated Review Leader Form Reference:	**Major / Minor**:	

Outcome: (Circle One)

ACCEPTED (Once comments have been actioned) **NOT ACCEPTED** (Wish to re-review once comm

No	Action Items:
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Agreed by:

Actions:	**Proposed Completion Date:**
Follow-up Date:	**Closure Signature & Date:**

REVIEW COMMENTS LIST

Items Under Review: (Application System Definition)	**Author:**
Version: 1 **Review Date: Oct 20, 1998**	
Reviewers Names OR Associated Review Leader Form Reference:	
Outcome: (Circle One) **ACCEPTED** (Once comments have been actioned) **NOT ACCEPTED** (Wish to re-review once com	

No	Reference	Properties	Cat	Pt	ACTIO
1	Application System Definition	Title			The title applicati on scree impleme
2	Application System Definition	Authority			The nam organiza applicati
3	Application System Definition	Owner			The orga is being
4	Application System Definition	Priorities			Add the system s will be i
5	Application System Definition	Constraints			Any con such as s
6	Application System Definition	Comments			Any com rules and followed
7	Application System Definition (TEXT)	Summary			Summar
8	Application System Definition (TEXT)	Objectives			The mai specifyin and how

9	Application System Definition (TEXT)	Description			Add syst including processir informat system is and wha
10	Application System Definition (TEXT)	Notes			Include r as develc phone nu

Note: Defines an application system and contains information on the type, objectives, priorities, constraints and authority for i brief description of the new application system.
The application system is initially owned by the Oracle user who created it. Full access rights on the application system are auto Subsequently, the owner can grant access rights and transfer ownership to any other Repository user by using the Repository Ob

Categories (Cat): MA - MAJOR MI - MINOR I - INFORMATION O - OBSERV
Problem Types (Pt): M - MISSING W - WRONG E - EXTRA/SUPERFLUOUS NE - NEED
CL - CLEARED (or tick)

REVIEW COMMENTS LIST

Items Under Review: **(Data Types CHAR or VARCHAR(2))**		**Autho**
Version: **1**	**Review Date:**	
Reviewers Names OR Associated Review Leader Form Reference:		
Outcome: (Circle One) **ACCEPTED** (Once comments have been actioned) **NOT ACCEPTED** (Wish to re-review once comn		

No	Reference Entity	Item	Pt
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Notes: All instances of the datatype CHAR should be replaced by VARCHAR2 unless there is a specific and documented requireme
padded comparison semantics. Usage of the CHAR datatype is intended to mirror the legacy file datatypes. However, VARCHAR2 s
attributes directly correlate to their relational counterparts elsewhere in the model which are of datatype VARCHAR2. Additionally,
data length, there is no advantage to CHAR; and if the fields are partially filled the appending of blanks makes comparison with cou
programmatic and less standard in SQL. Once the data is within the relational model there are very few advantages to the datatype C

Report:

Categories (Cat): MA - MAJOR MI - MINOR I - INFORMATION O - OBSERVA

Problem Types (Pt): M - MISSING W - WRONG E - EXTRA/SUPERFLUOUS NE - NEEDS

CL - CLEARED (or tick)

REVIEW COMMENTS LIST

Items Under Review: **(Attribute Comments)**		**Autho**
Version: **1**	**Review Date:**	

Reviewers Names OR Associated Review Leader Form Reference:

Outcome: (Circle One)
ACCEPTED (Once comments have been actioned) **NOT ACCEPTED** (Wish to re-review once comm

No	Entity	Attribute	Cat	Pt
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Notes: Attribute Comments become hint text on screens. Hints are seen by the user as they navigate from one field to another on a descriptive of the field it relates to. If this work is done up front in the analysis stage, design efforts are made simpler. Comments sl will become part of the user interface. In other words the interactive functions should include attributes with comments. This applie Information and View Transaction Set Status as an example.

Report:

Categories (Cat): MA - MAJOR MI - MINOR I - INFORMATION O - OBSERVA Problem Types (Pt): M - MISSING W - WRONG E - EXTRA/SUPERFLUOUS NE - NEEDS CL - CLEARED (or tick)

REVIEW COMMENTS LIST

Items Under Review: **(Domains)**		**Autho**
Version: **1**	**Review Date:**	

Reviewers Names OR Associated Review Leader Form Reference:

Outcome: (Circle One)
ACCEPTED (Once comments have been actioned) **NOT ACCEPTED** (Wish to re-review once comm

No	Domain	Value	Cat	Pt
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Notes: Domains are used to enforce datatype and length to multiple elements from a common reference point; consolidate common centralize the enforcement of fairly static valid values. It is often possible to consolidate domains to facilitate a "standard look and fe

Report:

Categories (Cat): MA - MAJOR MI - MINOR I - INFORMATION O - OBSERVA Problem Types (Pt): M - MISSING W - WRONG E - EXTRA/SUPERFLUOUS NE - NEEDS CL - CLEARED (or tick)

REVIEW COMMENTS LIST

Items Under Review: **(Naming Convention Consistency)** **Version: 1**	**Review Date:**	**Autho**

Reviewers Names OR Associated Review Leader Form Reference:

Outcome: (Circle One)
ACCEPTED (Once comments have been actioned) **NOT ACCEPTED** (Wish to re-review once comm

No	Reference	Element Naming Standard	Cat	Pt
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Notes: Naming conventions should be used to represent elements of similar nature. The data follows generally applied conventions purpose of the entity. Some violations of convention exist within the model. Note the need for adherence to conventions applies to a etc., i.e., for all analysis components. For example, time sensitive entities are split between 65 entities that use 'TIME SENSITIVE' a use 'TS'. A partial example list of attribute conventions is above with the number of attributes using the indicated convention.

Report:

Categories (Cat): MA - MAJOR MI - MINOR I - INFORMATION O - OBSERVA

Problem Types (Pt): M - MISSING W - WRONG E - EXTRA/SUPERFLUOUS NE - NEEDS

CL - CLEARED (or tick)

REVIEW COMMENTS LIST

Items Under Review: **(Exception Reports and Quality Checking Reports)**		**Autho**
Version: **1**	**Review Date:**	

Reviewers Names OR Associated Review Leader Form Reference:

Outcome: (Circle One)
ACCEPTED (Once comments have been actioned) **NOT ACCEPTED** (Wish to re-review once comm

No	Report	Comment	Cat	Pt
1	Entity Completeness Checks			
2	Quality Checking of Relationships			
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Notes: The above two reports reveal a great deal about the completeness of the analysis stage of an application.

Categories (Cat): MA - MAJOR MI - MINOR I - INFORMATION O - OBSERVA Problem Types (Pt): M - MISSING W - WRONG E - EXTRA/SUPERFLUOUS NE - NEEDS CL - CLEARED (or tick)

REVIEW COMMENTS LIST

Items Under Review: **(Functional Decomposition)**		**Autho**
Version: 1	**Review Date:**	
Reviewers Names OR Associated Review Leader Form Reference:		

Outcome: (Circle One)

ACCEPTED (Once comments have been actioned) **NOT ACCEPTED** (Wish to re-review once comm

No	Function	Comment	Cat	Pt
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Notes:

A functional model should be broken down into elementary and atomic functions. An elementary function is one that must be compl
it as started. For example, if you are transferring money from one account to another, first an account is credited, and then another
money is an elementary function. The separate functions of debiting and crediting are atomic functions.

(Oracle Method: Function Modeling Guidelines p.6-11)

Function labels - Use a hierarchical coding system for unique function labels. Use a three-character prefix for the
one-character prefix for main branches, thus representing sub-system functionality.
Functions definitions should always be expressed as a phrase of the format <verb> [<adjective>] <nou
Function definitions and descriptions should always use active language. Decomposed functions do not need to h
non-decomposed functions should be fully described, including examples if appropriate.

The most important concern regarding the number of functions is that there will likely be a large number of impl
accomplish the functionality.

Report:

Categories (Cat): MA - MAJOR MI - MINOR I - INFORMATION O - OBSERVA
Problem Types (Pt): M - MISSING W - WRONG E - EXTRA/SUPERFLUOUS NE - NEEDS
CL - CLEARED (or tick)